

Amendments to the Specification:

Please replace paragraph 17 on page 8 with the following rewritten paragraph:

-- At the radially inwardly end of each sidewall 16, a number of rim-engaging surfaces 12 are provided. First, a concave groove 28 is sized and positioned around the circumference to allow the tire 10 to be seated in a rim with an inwardly-projecting seating surface. Second, a lobe-like thickened portion 30 is situated at the end of each sidewall 16, which as seen in Figs. 1 and 1A, may be formed by tapering the end portion to a greater thickness between walls 20 and 24, with each of the portions 30 narrowing in cross-section from the sidewall to its end and having a convexly curved outer surface 32. While a slight separation 34 is shown between the sidewalls 16 in Fig. 1, it will be recognized that upon compressively fitting the tire 10 into a rim, the lobe-like thickened portions 30 will be compressed against each other, and the convexly curved outer surfaces will conform compressively into engagement with the internal surfaces of the rim. This means that the tire 10, while not a closed torus when dismounted from a proper rim due to separation 34, becomes an effectively closed torus upon mounting. Any air captured in the annular chamber 18 upon the mounting of the tire becomes entrapped and is able to provide a compressible resilient member having a different spring rate than the solid portions of the tire. Alternatively, the tire 10 may be provided with a valve 19 extending to the annular chamber 18 to allow the introduction of pressurized air into this region. In this manner, the tire 10 may be operated as a hybrid compression/tension tire, with the ability to add pressurized air to region 18 possibly providing desirable performance characteristics for various applications. As an example, in a passenger tire, the tire 10 without the introduction of pressurized air to chamber 18, provides improved performance characteristics, which as hereafter described in more detail, may include decreased rolling resistance, resulting in increased mileage and other attributes associated with the vehicle, which can further be enhanced by the introduction of pressurized air into chamber 18. It should be recognized for example, that the introduction of pressurized air to chamber 18 will further decrease the rolling resistance of the tire 10, which for various applications may be desirable. At the same time, the introduction of pressurized air to chamber 18 is not necessary to support the loads for a given duty cycle, and therefore if pressurization is lost from chamber 18, the tire 10 will still perform, providing extended mobility to the vehicle on which it is used. Further, the construction of tire 10 according to this embodiment is distinct from a conventional tire, where virtually all contact between the rim and the tire is borne on

Docket No: 116700-1

Serial No: 09/849,854

Reply to Office Action of December 3, 2003

radially extending sides of the rim and little or none of the contact is made with the radially facing surfaces of the rim. The tire 10 provides support by means of the sidewall 16 in conjunction with the cross member 13, wherein when mounted to a vehicle, the structure of tire 10 will be loaded under compression to support the vehicle in conjunction with the rim thereof. The design of the tire 10 provides an anisotropic assembly with structurally stable sidewalls 16 even in the absence of any positive pressurization beyond ambient in the annular chamber 18.